

**WHAT IS CLAIMED IS:**

- 10070363-030502
1. A method of producing a laminated packaging material (10) comprising a core layer (16) of paper or paperboard and a barrier layer (14) applied on one side of the core layer, characterised in that a liquid barrier composition including a dispersion or solution of a polymer and an inorganic laminar compound is applied as a barrier layer (14) on at least one side of a carrier layer (11) and is dried during heating for driving off the dispersant or solvent, whereafter the carrier layer (11) with the applied, dried barrier layer (14) is combined and permanently united with one side of the core layer (16).
2. A method as claimed in Claim 1, characterised in that said inorganic laminar compound is dispersed to an exfoliated and delaminated state in the liquid barrier composition and in the dried barrier layer.
3. A method as claimed in any one of Claims 1 or 2, characterised in that said barrier layer (14) is applied by means of liquid film coating with a liquid barrier polymer composition further including an inorganic laminar compound.
4. A method as claimed in any one of Claims 1-3, characterised in that the barrier layer (14) includes from about 1 to about 30 weight % of the inorganic laminar compound, based on dry coating weight.
5. A method as claimed in any one of Claims 1-4, characterised in that the barrier layer (14) includes from about 70 to about 99. weight % of polymer, based on dry coating weight.

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6. A method as claimed in any one of Claims 1-5, characterised in that the amount of the liquid gas barrier composition coated onto the carrier layer is from about 1 to about 10 g/m<sup>2</sup> based on dry coating weight.

7. A method as claimed in any one of Claims 1-6, characterised in that the liquid gas barrier composition applied as barrier layer (14) includes a polymer with functional hydroxyl groups.

8. A method as claimed in Claim 7, characterised in that said polymer with functional hydroxyl groups is selected from among polyvinyl alcohol, ethylene vinyl alcohol, starch, starch derivatives, carboxyl methyl cellulose and other cellulose derivatives, or a mixture of two or more thereof.

9. A method as claimed in any one of Claims 1 to 8, characterised in that said liquid gas barrier composition applied as barrier layer (14) is dried and optionally cured at a temperature of approx. 80-230°C.

10. A method as claimed in any one of Claims 1 to 9, characterised in that said liquid gas barrier composition applied as barrier layer (14) also includes a polymer with functional carboxylic acid groups.

11. A method as claimed in Claim 10, characterised in that said polymer with functional carboxylic acid groups is selected from among ethylene acrylic acid copolymer and ethylene methacrylic acid copolymer or mixtures thereof.

12. A method as claimed in Claim 11, characterised in that said barrier layer (14) substantially consists of a mixture of polyvinyl alcohol, ethylene acrylic acid copolymer and the inorganic laminar compound.

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13. A method as claimed in any one of Claims 2 to 11 characterised in that the barrier layer (14) substantially consists of a mixture of starch or starch derivative and the inorganic laminar compound.

5 14. A method as claimed in any one of the preceding Claims, characterised in that the dried barrier layer (14) is cured at a web surface temperature of up to 190°C.

10 15. A method as claimed in any one of the preceding Claims, characterised in that the liquid barrier composition is applied as a barrier layer (14) is dried at a web surface temperature of 140 to 160 °C and is cured at a web surface temperature of from 170 to 190°C.

16. A method as claimed in any one of the preceding Claims, characterised in that said carrier layer (11) consists of paper.

15 17. A method as claimed in any one of the preceding Claims, characterised in that said carrier layer (11) consists of paper with a grammage of approx. 5-35 g/m<sup>2</sup>.

18. A method as claimed in any one of the preceding Claims, characterised in that said carrier layer (11) consists of plastic coated paper.

20 19. A method as claimed in any one of the preceding Claims, characterised in that the carrier layer (11) bearing at least one barrier layer (14) is combined and united with the core layer by extrusion of a layer of thermoplastics (19) therebetween.

20. A method as claimed in any one of the preceding Claims, characterised in that the carrier layer (11) bears a said barrier layer (14) on one side thereof and is combined with the core layer (16) by extrusion of a layer of Athermoplastics between the carrier layer and the core layer.

5 21. A method as claimed in Claim 20, characterised in that an outer layer (21) of thermoplastics is applied on the barrier layer (14) by means of extrusion.

10 22. A method as claimed in Claim 20, characterised in that the carrier layer (11) bears a said barrier layer (14) on one or both sides and is combined with the core layer by extrusion of a layer of thermoplastics (19) between the core layer and a said barrier layer.

23. A method as claimed in Claim 22, characterised in that the carrier layer bears a said barrier layer on both sides thereof and a layer of thermoplastics is applied to the outer layer of barrier material by extrusion.

15 24. A method as claimed in any one of the preceding Claims, characterised in that the layer (19) of plastics applied between the core layer (16) and the carrier layer (11) or a said barrier layer (14) includes a substance functioning as light barrier.

20 25. A laminated packaging material (10), characterised in that it is produced by the method as claimed in any of Claims 1 to 24.

26. A packaging container (50), characterised in that it is produced by fold formation of a sheet or web-shaped laminated packaging material (10) as claimed in Claim 25.

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